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A Visit to Le Lautaret. (*With two plates*).

By Dr. T. A. CHAPMAN, F.Z.S.

It is many years since I paid my first short visit to Le Lautaret, and was then much impressed with the remarkable character, both as to flora and fauna, for which it is celebrated. My memory serves me, however, but badly as to details, and all I clearly recollect is finding cocoons and imagines of *Heterogynis penella*, which I had previously supposed to be near its limit as to combined North Latitude and elevation at Digne. It occurs, however, in the Vosges, at, I believe, comparatively low levels.

I visited Le Lautaret again in 1905, along with Mr. Champion, we stayed there a week and got about a good deal, yet had a couple of days' experience of what Le Lautaret could be like in the height of its summer, the thermometer fell to 41° as a day temperature with rain and wind, and for this couple of days the only way to keep warm was to get under the bed-clothes. On my visit this year I was favoured by fine summer weather for nearly the whole fortnight of my stay.

There are many references to Le Lautaret in our Magazine, but the only account in any detail is that by Tutt, in vol. xiii., p. 253., and in vol. ix., p. 13. There is a passing reference to it by Mr. Pearson, in vol. xxiv., p. 97, but he seems to have been scared by the hotel accommodation there, though one judges from his tale that he went further and fared worse. As a matter of fact, Le Lautaret Hospice gives fair entertainment, and though not perhaps affording all the heart can desire, it compares not unfavourably with the Swiss hotel of 30 or 40 years ago, which one always found so satisfactory when on a walking tour.

The remarkably abundant and luxuriant vegetation here took Mr. Tutt's attention, as it must do that of all who take even a mere ramble near the Col. One is inclined to say that one finds here all the alpine plants of Switzerland, especially of Western Switzerland, with many others, and such a statement would not be so far from the truth as might be at first sight supposed, and one is struck to find growing side by side many plants that one has only seen before far away from each other.

Whether the agricultural (or pastoral?) arrangements of the district have been arranged to suit the remarkable plant growth, or whether the latter has been conditioned by the farming arrangements, they

certainly seem to combine to favour the floral plethora with which one never ceases to be astonished and gratified.

The North side (facing South) of the Valley from Villar d'Arène to Lautaret, from some 6,000ft. upwards to 8,000ft. or 8,500ft., is not grazed, but all is cut for hay, and this cutting is not begun till quite the end of July, nor finished till well into September, when the seven or eight months' winter commences. Any grazing is done on only a few awkward places after the cutting is over and this late cutting seems to enable the plants to thrive about as well as if they were not cut at all, though how such luxuriance persists with constant cropping and no return, was a puzzle for which I could not find the key. On the opposite (south) side of the valley, with trifling exceptions in places, the whole slope is grazed, and the different aspect of the vegetation is very striking, due more perhaps to the aspect than to this different treatment. From some 8,000ft. or 8,500ft. upwards, grazing obtains on all available areas. Insects seem also able to maintain themselves in the mowing areas, not usually in profusion like the plant life, but vastly in excess of what usually occurs in the mowed meadows of the lower areas in Switzerland.

Mr. Tutt's references to the species he met with is so detailed that it would be superfluous for me to go over the same ground now, and I will only refer to such points as may extend the picture of the butterfly fauna of the district that he gives.

I visited this district largely with a view to studying *Agriades thersites*, and went to Le Lautaret to fill up time till the second brood emerged at lower levels. I was rather astonished to find it at Le Lautaret, but this and other items in reference to that species may be left till I have something to say as to its life-history. I have now got larvæ which appear determined to hibernate, so that whether I shall succeed or not in getting them through the winter is my present problem. Mr. Tutt says he took *Polyommatus icarus* var. *icarinus* here. I do not find these amongst any of his specimens that have come my way; probably these were *Agriades thersites*, but *icarinus* is not very rare at Le Lautaret. *P. icarus* is common and well distributed, but the commonest "blue" at Lautaret is certainly *P. eros*, though it is a little localised. It is abundant wherever *Oxytropis campestris* grows, and also with *Astragalus aristatus; Phaca astragalina* is also a foodplant, though not apparently so much favoured, and accounts, I think, for the more scattered occurrence of *P. eros*. It very probably has other less acceptable foodplants.

After *P. eros* the most abundant "blue" was *Plebeius argyrognomon*, *P. icarus* being rather less common. Tutt notices *P. argyrognomon* (under name *P. argus*) as only locally common; it was during my visit generally distributed and common in most places. Really much more abundant than *P. eros*, if allowance be made for the latter being abundant in only a few restricted localities. *Plebeius argus* (*aegon*) was rare, and only occurred occasionally.

A ♀ of *Cupido sebrus* was met with, and a few odd specimens of *Lycaena arion*, a small dark form. *Polyommatus semiargus* was not uncommon. Tutt says the specimens were small compared with examples from the Tyrol. They seemed to me about average size, one ♀ was 35mm.; Wheeler says 30mm., Ruhl 32-34mm. *Agriades coridon* was not uncommon, but rather below the Hospice, becoming frequent

at 500ft. lower. *Cupido minimus* was frequent, but never common as Tutt found it. A few specimens of *Albulina pheretes* and *P. hylas*, which Tutt did not take, occurred, but were nowhere common.

Polyommatus escheri.—I took this species a little below Le Lautaret, the highest point about 400ft. below the Hospice, say about 6,400ft. It occurred here perhaps ten days later than at Bourg d'Oisans. My observations lead me to believe that this species is single-brooded at all the levels at which I have taken it, but I do not feel at all certain as to this. At each locality where I have taken it, it appears to have a local race distinguishable from others by size, by amount of darkening of the borders, in darkness of underside, etc., though there is generally sufficient variability in each race to make the characters of the local race not necessarily those of every specimen.

The Lautaret specimens are as small as any I have met with, *viz.*, about 32-34mm. Those from Gavarnie in the Pyrenees are about 34-36mm., those from Binn very little larger. Wheeler (*Butts. of Switz.*) gives 38mm., which is probably a fair average for Swiss forms. Those taken at Bourg d'Oisans range about 38-42mm., and those taken last year at Bourg St. Maurice and elsewhere in the Valley of the Isére were rather larger. They were also notable as having many specimens with much more black shading towards the margin and towards the ends of the veins. The largest and finest specimens also showed most distinctly the white sheen along the veins towards the costa, which give these larger specimens so much brilliancy when alive; the same white gloss is perhaps seen in other species, most often in fine large *P. icarus*. Specimens from Courmayeur range about 36mm. to 38mm.

Mr. Tutt saw, but did not take, *Parnassius delius*. I did not see a specimen, nor did I happen to come across a very hopeful locality for it, though there must be many in the region, the foodplant of *P. delius* was frequently seen but never in the quantity that *P. delius* affects. *P. apollo* occurred in various places, both above and below the Hospice, but only commonly some 500ft. lower. Though *Colias phicomone* was common *C. palaeno* was not seen, though *Vacciniina optilete* which has the same foodplant occurred in odd specimens.

On July 31st I took on ground some 400ft. or 500ft. above Le Lautaret, and towards Villar d'Arène a black *Argynnis aglaia*. It is not in quite perfect condition, and very closely resembles the figure given on pl. viii., vol. xiv., p. 311, of the *Ent. Record*.

A species not referred to by Tutt is *Erebia glacialis*. The species is no doubt common, probably occurring in all suitable localities, of which many are visible (from below) on all sides. On each of my visits I saw this on the Col du Galibier and neighbouring slopes. On my visit there this year on July 27th, it was fairly common, but as usual difficult to catch, and owing to want of sun not on the wing all the time. The form occurring here is an absolutely black one. I have one specimen on the underside of which a little brownish may be detected by a willing observer. This *pluto* form is the only one I have seen here, though probably it affords other forms as rare aberrations.

Tutt notices the close approach in general aspect that occurs at Le Lautaret between *Erebia melampus* and *Erebia pharte*, and goes so far as to assert that, at this locality, whatever they are elsewhere, they are one species. Mr. Elwes was, apparently (*Ent. Soc. Lond.*, November 4th, 1896), in full agreement with him in the matter, nor

do I know of any definite disagreement with this result being recorded except my brief remarks in *Trans. Ent. Soc.*, 1898, p. 204. As regards the close resemblance of these two species at Le Lautaret, *Erebia ceto* ought certainly to be added to the group, if not also *E. epiphron*. These four species fly together, it is almost impossible to distinguish them on the wing, though there is a little difference in the flight of *E. melampus* that enables one often to make a fair guess as to which it is. When caught, *E. epiphron* and *E. ceto* are easily recognised, though the latter is a small form with very small markings, both the brown patches and eyespots, so that it differs little at first view from *E. melampus*, till the wedge-shaped form of the brown spots is noticed. *E. pharte* is, perhaps, best separated by the form of the brown beneath the forewing, which is a more or less regular, continuous band; in *E. melampus* it is irregular, broken up, or defective. I did not bring home many specimens of these, but I captured a very considerable number, and never had any difficulty in saying to what species any specimen belonged.

The close resemblance of these species here is due to what may be called, for convenience, whether it be really so or not, the mimicry of *E. pharte* by *E. melampus*, and by *E. ceto*. In *E. melampus* the black spots dwindle and almost disappear to a degree that is certainly rare in other localities, whilst in *E. ceto* the same change occurs, and the size of the insect is much the same as that of *E. pharte*. I do not know what is the most typical size of *E. ceto*. At Fusio they are very large; nowhere are they, I think, smaller than at Le Lautaret.

If mimicry has anything to do with this grouping, it is curious that *E. pharte* should be the model, as it seems to be, the *E. pharte* being very nearly of the usual form, and the *E. melampus* and *E. ceto* varied to accord with it. In connection with this I may refer to the long series of *E. pharte* and *E. manto*, which I took above Guarda (Lower Engadine), in which the *E. manto* has departed from its usual form, and in appearance is very close indeed to *E. pharte*, so close in some cases that it is certainly more difficult to pronounce as to some specimens than it is in the case of *E. melampus* and *E. pharte* at Le Lautaret. Yet ordinary *E. manto* is really a very different insect from *E. pharte*.

This case of *E. manto* seems to confirm the idea that it is the *E. pharte*, that is the model, and that the other species achieve some advantage by confusing themselves with it.

Amongst the moths the only species not noticed by Tutt about which I need make any remark are *Omia cymbalariae*, which was frequently seen on the wing in the sunshine, possibly stirred up, but I think seen so often that flying in the sunshine must be its natural habit. *Clisiocampa alpicola* larvæ were seen, a fresh ♀ imago was found at rest. The nests of *Eriogaster arbusculae*, which is certainly specifically distinct from *E. lanestris*, were abundant on the low-growing *Salix arbuscula* in wet places, and also on alders. Larvæ were also found, but no nests, in places where both willows and alders were very distant, so that some other foodplant or foodplants seem to be indicated. Larvæ of this species brought home in previous years always failed to be successfully treated, small ones died, larger ones were stung with hardly an exception, and the few cocoons finally obtained never eventuated, so I made no attempt to do anything with the species on this occasion.

Mr. Tutt notes that *Anthrocera* (*Zygaena*) *exulans* was "in the utmost profusion." Mr. Tutt's dates were from July 30th to August 5th. Mine from July 22nd to August 5th, yet I hardly saw a specimen of *A. exulans*, not, I should say, a couple of dozen. *A. minos* was common, and six spotted species (*filipendulae*, etc.), occurred. I have seen *A. exulans* "in the utmost profusion" in various places in the Swiss and Graian Alps, and without actually formulating an opinion, I imagine that I supposed that at these localities they were always so. I don't think I ever visited any of these places in another year to test the matter. Here, however, Tutt found them in profusion in 1896. In 1913 they were certainly very rare. I conclude, therefore, that when one finds them swarming, as they sometimes do, the season has more to do with it than the actual locality.

An interesting species met with at about 8000ft. was *Anaitis simpliciata*, an inhabitant of the Dauphiny Alps, but not those of Switzerland, and not met with apparently between Dauphiny and Hungary. I also took a specimen of *Crambus pauperellus*. I don't know whether this has been recorded from Dauphiny, but it occurs in the Jura and the Vosges, and like *A. simpliciata* is not seen to the east of this till we reach Hungary. *Heterogynis penella* was common in various places, but though I did meet with larvæ and cocoons, I was much struck by their rarity in comparison with the imagines; one would expect to see at least plenty of empty cocoons. The species of this genus, however, differ much in different localities in this matter. At Digne the cocoons of this species are everywhere conspicuous.

The Prohibition of the Capture of Parnassius apollo.

By Prof. M. GILLMER.

[Prof. Gilimer, of Cöthen, Hesse Darmstadt, has very kindly furnished us with the history and full particulars of the Prohibition, and Mr. Sich has carefully translated his account into English. It may not be uninteresting to have the exact information, as it was originally stated that the Prohibition was over the whole of Germany, whereas it is only in one or two areas, where the species has been excessively harassed by professional collectors for years.—H.J.T.]

July 13th, 1912.

Reintroducing Parnassius apollo on the Calvarienberg, near Bozen.

Oberleutnant Wilhelm von Dragoni-Rabenhorst, of Gries, near Bozen (Tirol), writes, that formerly the Calvarienberg at Bozen, was an excellent locality for *P. apollo*. A collector, who annually visited this fat pasture land, is said to have so far succeeded by assiduous collecting, that now not a single *apollo* flies on the Calvarienberg. W. von Dragoni-Rabenhorst has put down on the Calverienberg a large number of larvæ of *P. apollo* var. *rubidus*, from the neighbouring Eisack Valley, and asks entomologists to spare *apollo* until it has again become firmly established there.